PVP 14

Code: EE2T3, ME2T3, AE2T3

I B. Tech-II Semester–Regular / Supplementary Examinations–April 2019

ENGINEERING CHEMISTRY
(Common for EEE, ME & AE)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11x 2 = 22 M

1. a) What are the advantages of ion exchange method?
   b) Name any two coagulants used in treatment of water.
   c) What are blended conducting polymer?
   d) Write any three advantages of fibre reinforced plastic.
   e) Write any three principles of green chemistry.
   f) What is a fullerene? Write about the C60 fullerene.
   g) What is galvanic series?
   h) What is differential aeration corrosion?
   i) Mention the types of semiconductors.
   j) Write any three applications of liquid crystals.
   k) Explain the green house concept in the field of agriculture.

PART – B

Answer any ***THREE*** questions. All questions carry equal marks.
3 x 16 = 48 M

2. a) How is hard water softened by zeolite method? Write the reactions involved. 8 M

   b) Describe the reverse osmosis method for the desalination of brackish water and draw the neat diagram. 8 M

3. a) Write an account of the following. 8 M
   i) Classification of conducting polymer
   ii) p-doped conducting polymer

   b) Which materials are called fibre-reinforced plastics and write the advantages and applications of fibre-reinforced plastics. 8 M

4. a) What is green chemistry? Explain phase transfer method in green synthesis. 8 M

   b) How is CNT prepared by the following methods? 8 M
   i) Arc discharge ii) Chemical vapour deposition

5. a) What is corrosion? Write a detail note on factors effecting corrosion. 8 M

b) What is paint? What are the differential constituents of paint and explain their functions in Controlling corrosion. 8 M

6. a) Write notes on Organic and controlled valency semiconductors and their applications. 8 M

b) What are liquid crystals? Explain the types of liquid crystals with applications. 8 M